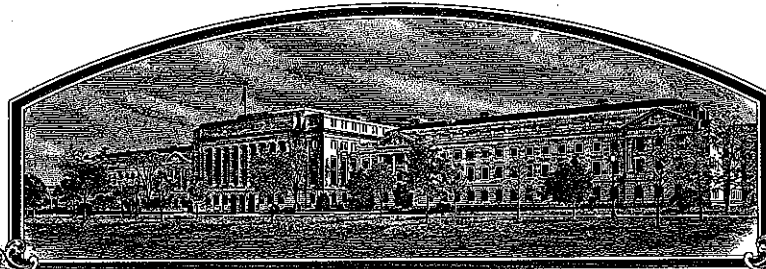


No.

200200126



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Frito-Lay North America, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

POTATO

'FL 1922'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fifth day of June, in the year two thousand and eight.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Frito-Lay North America, Inc. 2/11/05 <i>exp</i>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME 1989 84.13	3. VARIETY NAME FL1922
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 7701 Legacy Drive Plano, Texas 75024 2/11/05 <i>exp</i>		5. TELEPHONE (Include area code) 972-334-3822	FOR OFFICIAL USE ONLY PVPO NUMBER <div style="font-size: 1.5em; font-weight: bold;">200200126</div>
		6. FAX (Include area code) 972-334-5965	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation	8. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware	9. DATE OF INCORPORATION 8/8/89	FILING DATE <div style="font-size: 1.5em; font-weight: bold;">2002/03/29</div>
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Robert J. Jondle, Esquire P.O. Box 1522 Jondle & Associates, P.C. 858 Happy Canyon Road, Suit 230 Castle Rock, CO 80108 <div style="text-align: center; font-weight: bold; font-size: 1.2em;">LMC 11-22-05</div>			FILING AND EXAMINATION FEES: <div style="font-size: 1.5em; font-weight: bold;">\$ 2705.00</div> DATE <div style="font-size: 1.5em; font-weight: bold;">02/03/09</div> CERTIFICATION FEE: <div style="font-size: 1.5em; font-weight: bold;">\$ 768.00</div> DATE <div style="font-size: 1.5em; font-weight: bold;">09/14/07</div>
11. TELEPHONE (Include area code) 402-333-1550	12. FAX (Include area code) 402-333-1510	13. E-MAIL rjondle@rothwellfigg.com	14. CROP KIND (Common Name) Potato
15. GENUS AND SPECIES NAME OF CROP <u>Solanum tuberosum</u>		16. FAMILY NAME (Botanical) Solanaceae	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22)	
		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1,2,3, etc. (If additional explanation is necessary, please use the space indicated on the reverse.)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <div style="font-size: 1.2em;">4/2001 in the U.S.</div> <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER <div style="font-size: 1.5em; font-family: cursive;">Thomas P. Schur</div>		SIGNATURE OF OWNER _____	
NAME (Please print or type) Thomas P. Schur		NAME (Please print or type) _____	
CAPACITY OR TITLE Secretary, Recot, Inc.	DATE <div style="font-size: 1.5em; font-family: cursive;">19 MAR 02</div>	CAPACITY OR TITLE _____	DATE _____

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed Exhibits A, B, C, E; (3) at least 2,500 viable untreated seeds, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in a public repository prior to issuance of a certificate; (4) check drawn on a U.S. bank for \$2,450 (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (*See Section 97.175 of the Regulations and Rules of Practice.*) Partial applications will be held in the PVPO for not more than 30 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 1030 Baltimore Blvd., Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self-explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: (301) 504-5518

#200200126

ITEM

- 16a. Give:
 - (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
 - (2) the details of subsequent stages of selection and multiplication;
 - (3) evidence of uniformity and stability; and
 - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified.
- 16b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
 - (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences;
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 16c. Exhibit C forms are available from the PVPO for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 16d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 16e. Section 52(4) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. The applicant may be the actual breeder, the employee of the breeder, the owner through purchase or inheritance, etc.
17. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant may NOT reverse this affirmative decision after the variety has been sold and so labelled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (*See P.L. 103-349 for additional information.*)
20. See Sections 41, 42, and 43 of the Act and Section 97.175 of the regulations for eligibility requirements.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is specified in Section 97.175 of the regulations. (*See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of Regulations and Rules of Practice.*)

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Washington, DC 20260; and to the Office of Management and Budget, Paperwork Reduction Project (OMB No. 0581-0055), Washington, DC 20503.

#200200126

Date and Place of First Sale of FL 1922

'FL 1922' was first sold in the United States in April 2001.

CONFIDENTIAL

Exhibit A: Origin and Breeding History of the Variety

FL 1922 originated in the Frito-Lay, Inc. private potato breeding program. The variety is the result of classical hybridization breeding. No gene insertion was involved in the breeding of FL 1922 or its parents. In 1988, Dr. Martin Cipar made a cross at the Frito-Lay Research facility near Rhinelander, Wisconsin between the varieties FL 1533 and FL 1207. FL 1533 was chosen as a breeding parent because of its high yields, nice chip color off the field and out of mid-season storage and resistance to hollow heart disorder. FL 1533 also tolerates drought conditions and therefore can be grown in non-irrigated areas. FL 1207 was chosen as a breeding parent because it provides excellent transmission of long term storage color.

Seeds from the cross FL 1533 x FL 1207 were sown in the greenhouse near Rhinelander in the summer of 1988 and the resulting tubers were harvested in late fall of that year. Seedling tubers were planted in the field in the spring of 1989. One of the selections from this progeny was given the designation "1989 84.13". This selection was tested for four years in the fields near Rhinelander, with solids measurements and potato chip fry samples taken after each harvest. 1989 84.13 was found to process well from storage and possesses good resistance to common scab, as observed overall several years in areas with high scab pressure in Nebraska and Wisconsin. FL 1922 is an early to mid-season chipping variety with white fleshed, round to oval tubers. Its outstanding attributes are excellent chip appearance, with good flavor and resistance to common scab.

In 1995, 1989 84.13 was given the name "FL 1922". It was tested in replicated trials conducted by Frito-Lay, Inc. in Nebraska and Wisconsin. The chip appearance, manufacturing efficiency and consumer acceptability have been equal or superior to checks.

FL 1922 was observed for 6 generations in 12 locations and was determined to be genetically uniform and stable from generation to generation with no evidence of variants.

Tissue culture plantlets of FL 1922 were established in 1991 and are maintained at the Frito-Lay Research facility near Rhinelander, Wisconsin with a duplicate maintained by the Wisconsin Seed Potato Certification Program in Madison.

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

4-1-1991, Frito-Lay

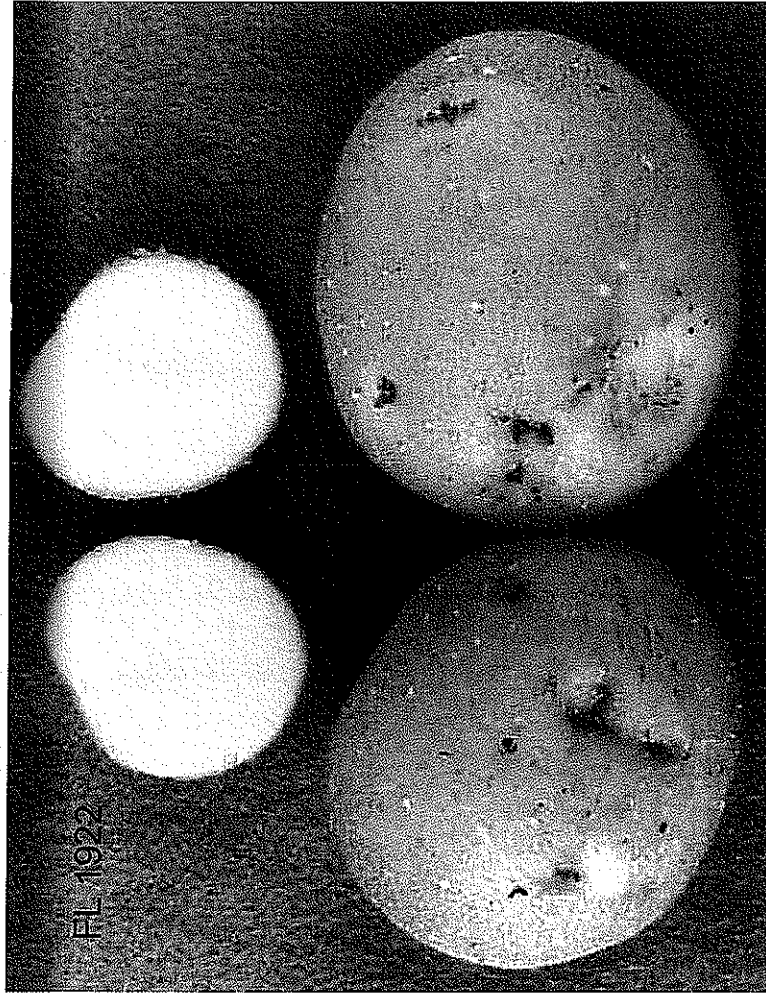
[illegible]

Exhibit B: Statement of Distinctness

As a chipping variety for fresh use from mid and late season harvests and use out of storage, FL 1922 is most similar to Norchip. FL 1922 can be distinguished from Norchip with regard to the following traits: FL 1922 has tubers with blue eyes (RHS 81A) while Norchip does not (pigmentation is absent in the eyes). FL 1922 has a spreading growth habit, while Norchip has a semi-erect growth habit. FL 1922 has purple flowers (RHS 90B), while Norchip has white flowers (RHS 155A). FL 1922 has medium anthocyanin pigmentation of the stem (RHS 79B), while Norchip lacks stem anthocyanin pigmentation. Additionally, the tuber flesh color of FL 1922 is a lighter yellow-white (RHS 158B), while the tuber flesh color of Norchip is a darker yellow-white (RHS 158A).

Isozyme pattern for FL 1922, as established by Dr. David Douches of Michigan State University is unique among known North American Varieties. This is detailed in Exhibit D-1, Additionall Description of the Variety.

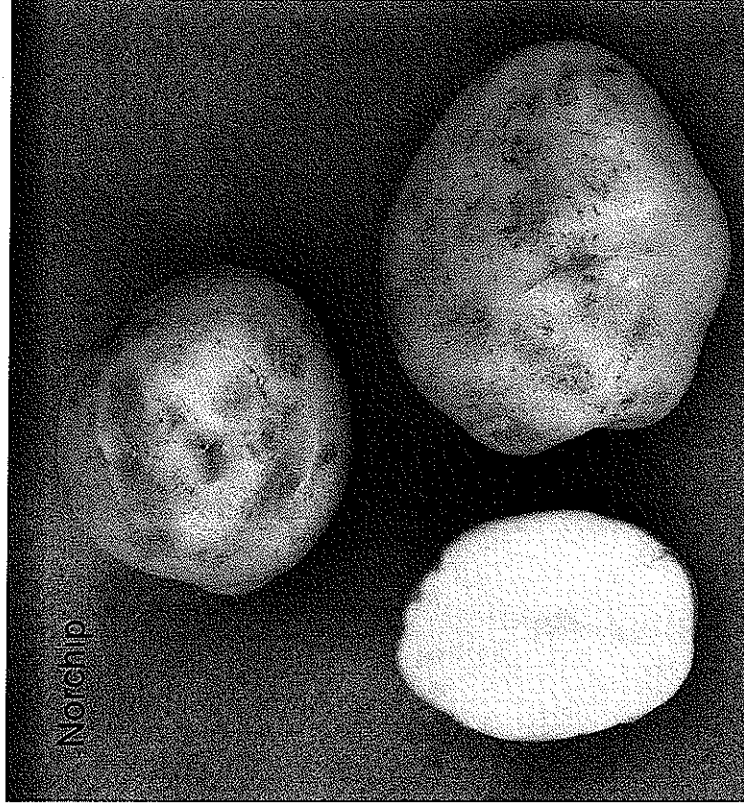
2002-01-26



Secondary skin color in eyes

RHS # 81A

Tuber flesh color RHS#158B,
white

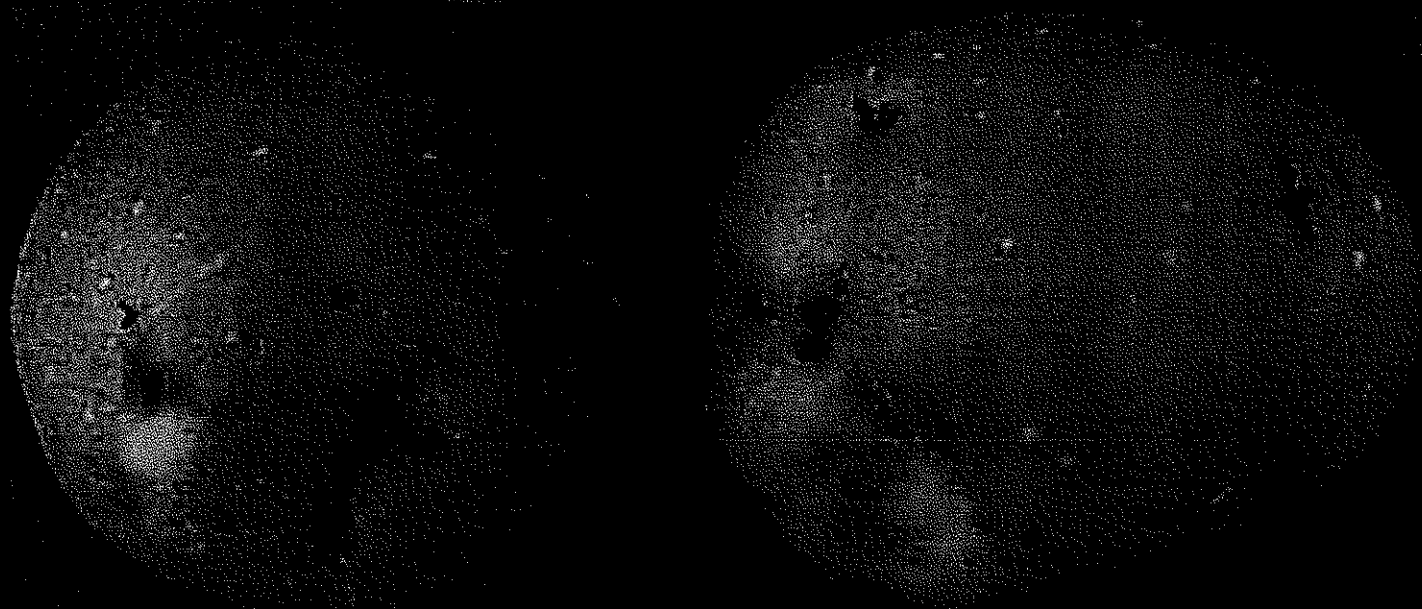
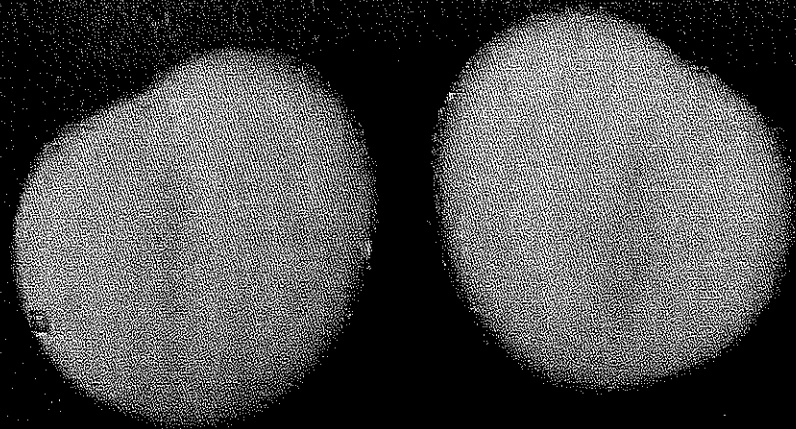


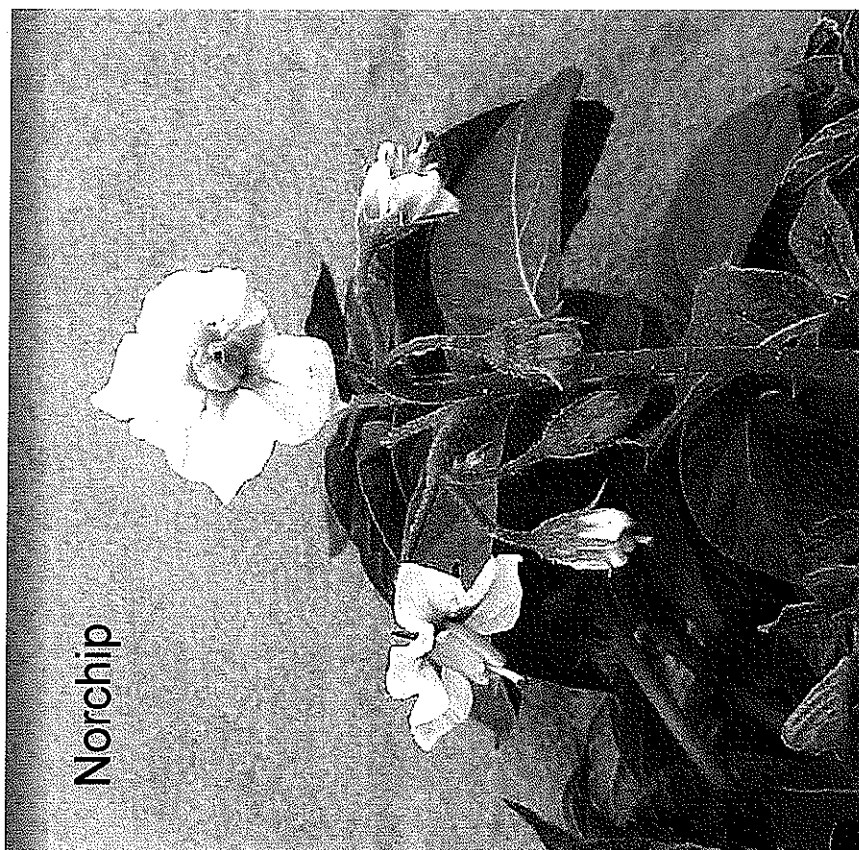
Secondary skin color absent

Tuber flesh color
RHS#158A, white

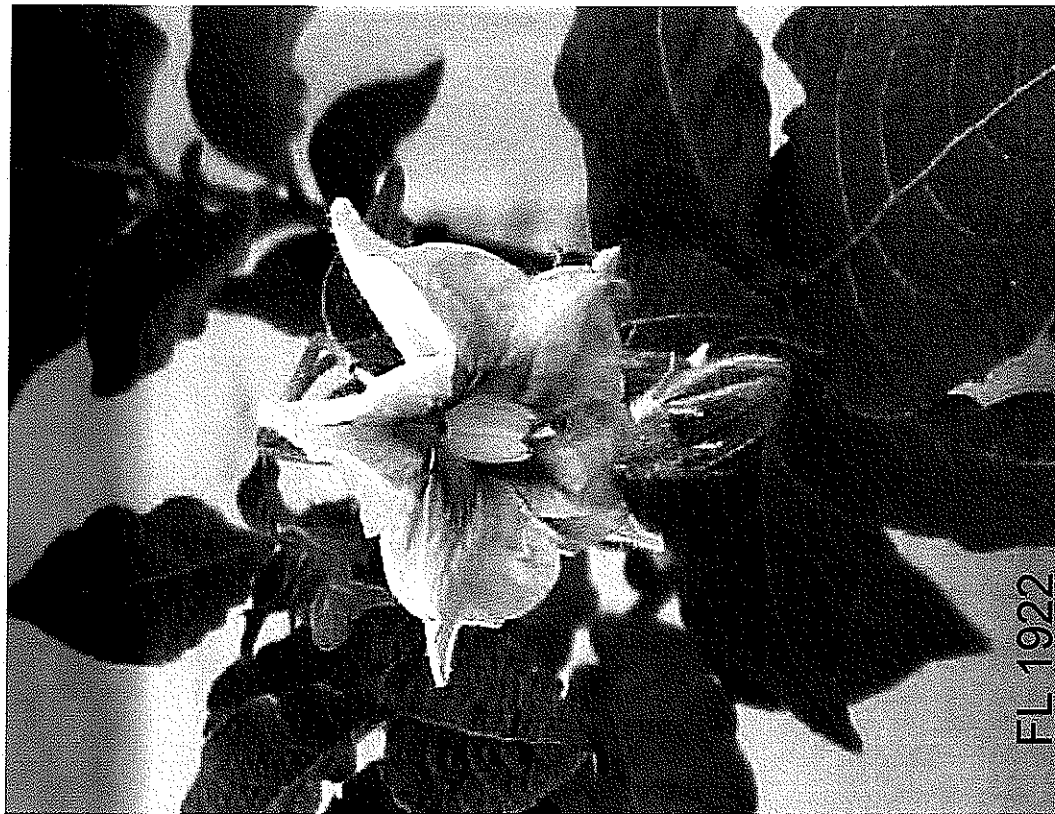
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FL 1922





RHS # 155A



RHS # 90B

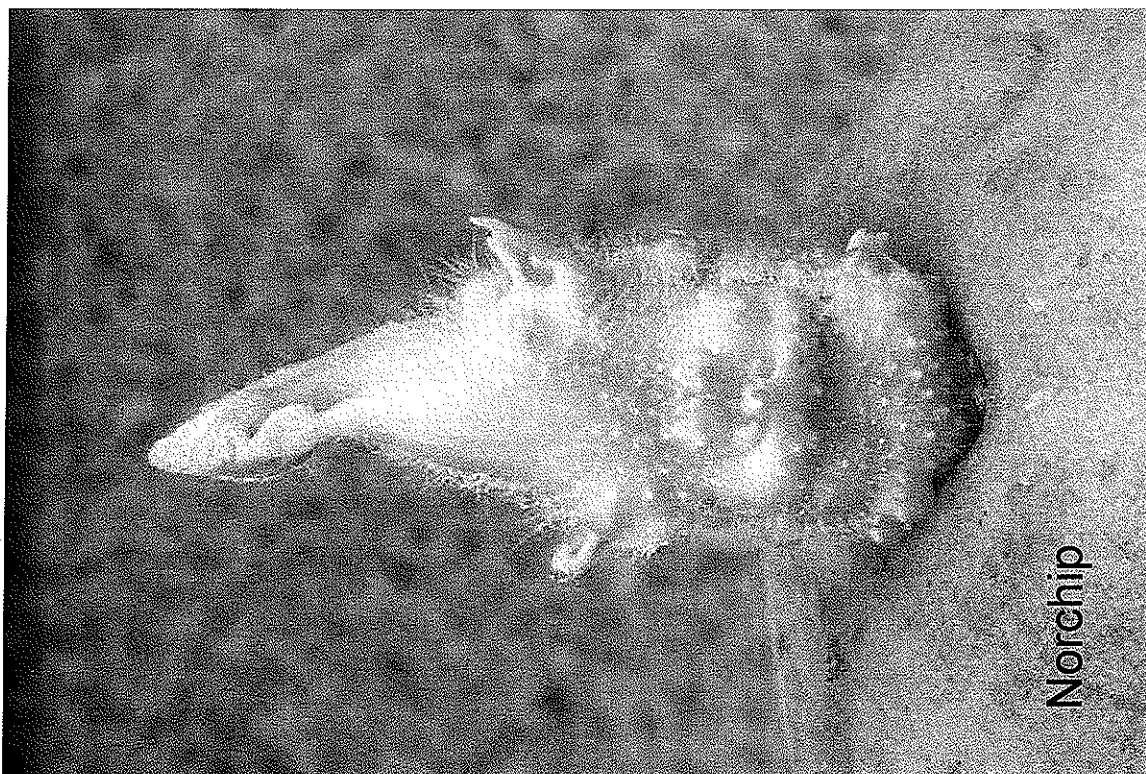


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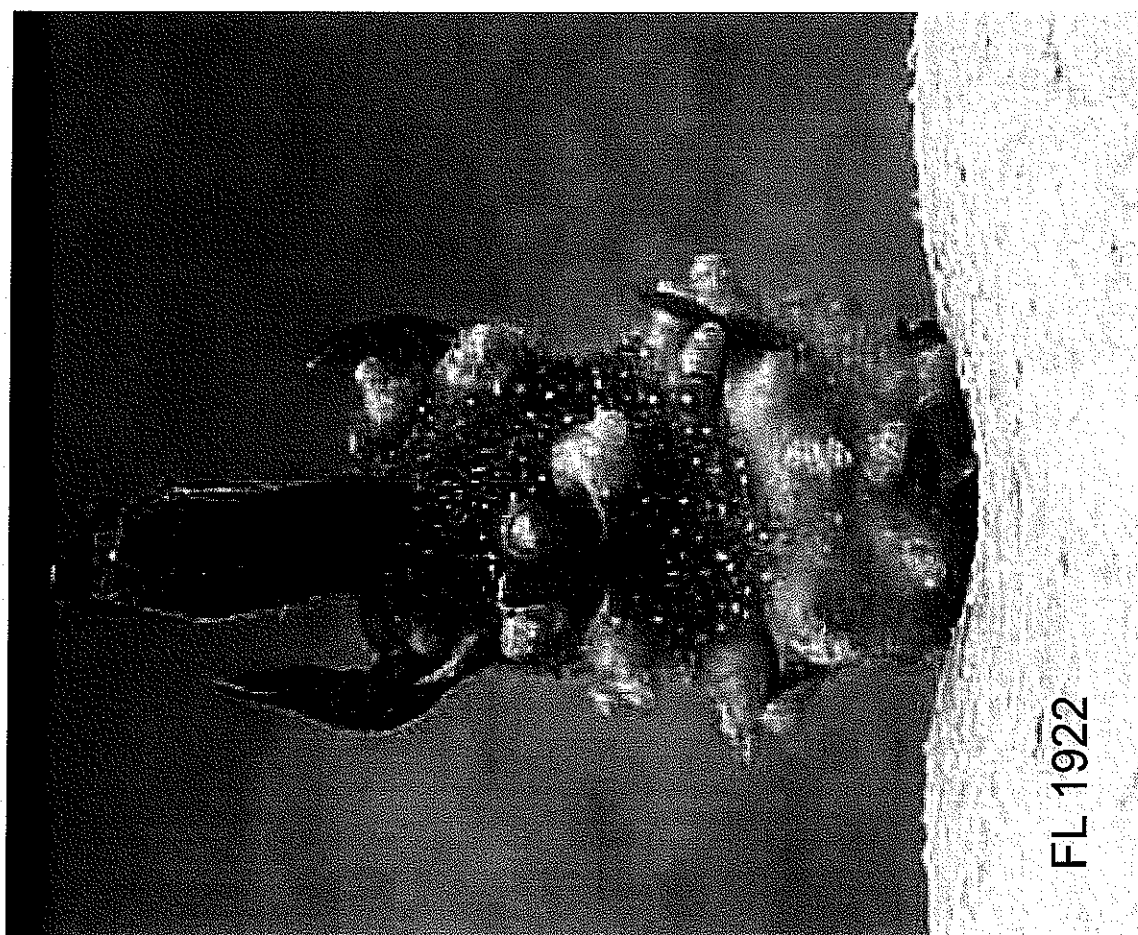
FL1922



#200200126



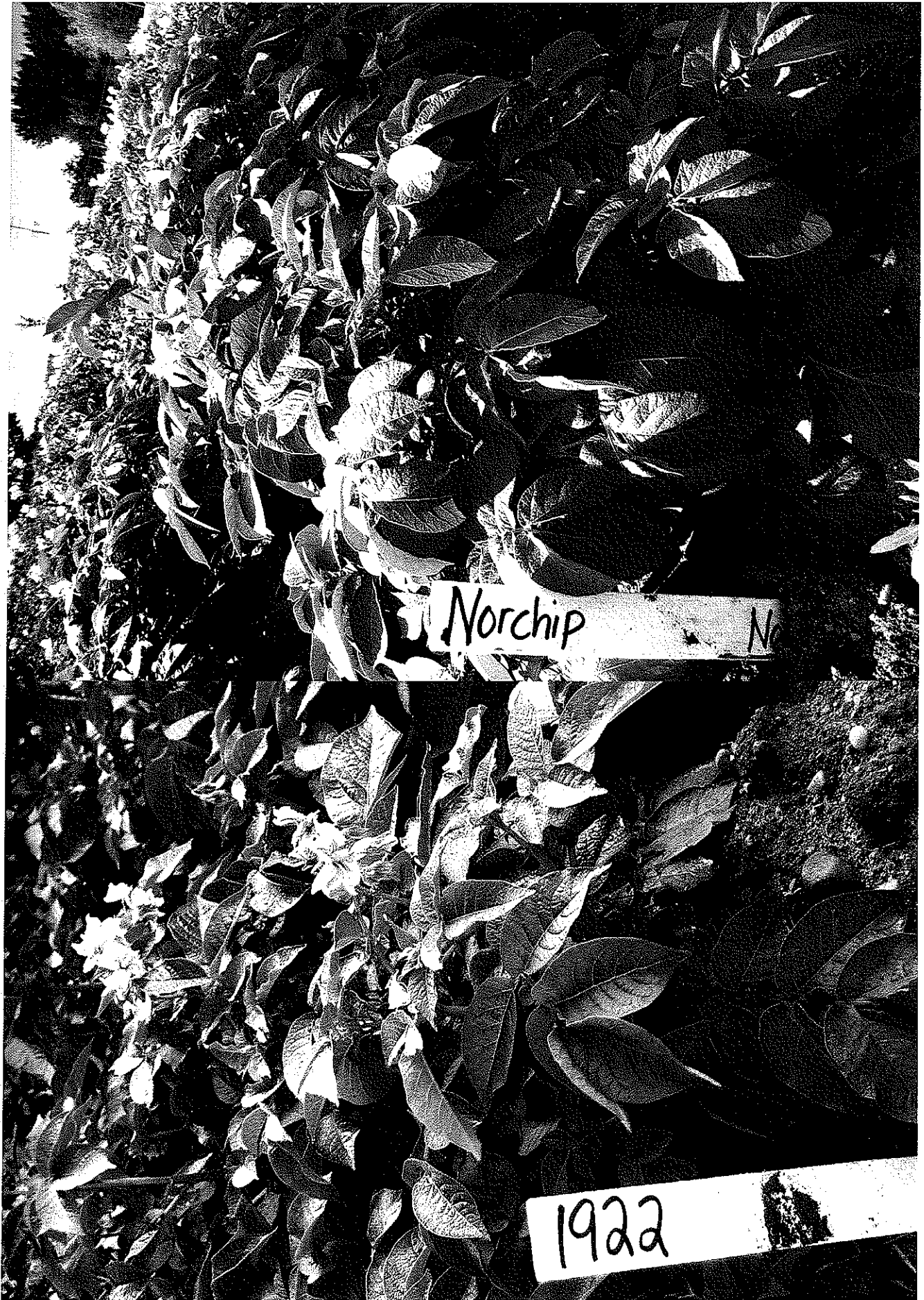
Norchip



FL 1922

#200200126

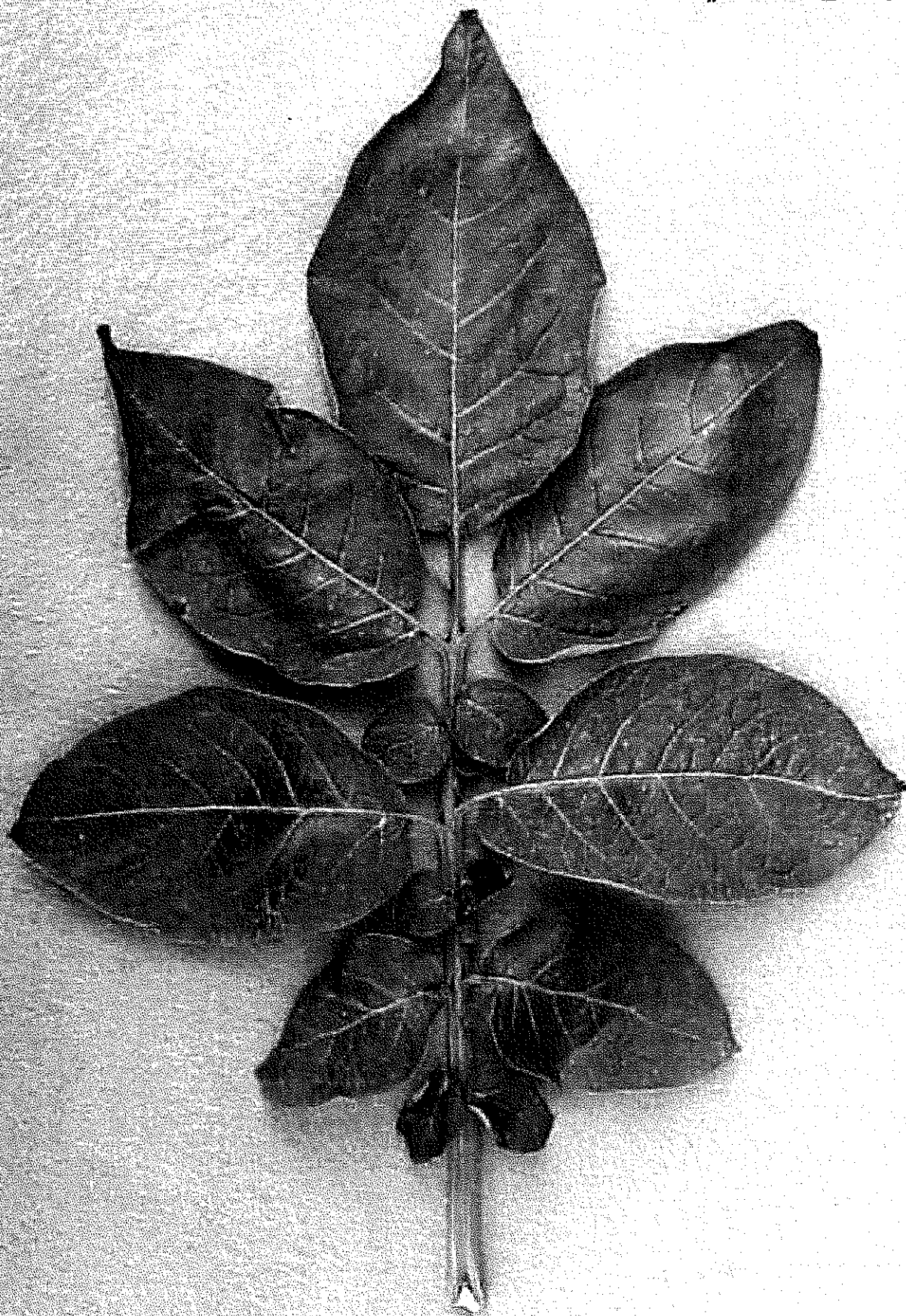




Stem anthocyanin absent

Stem anthocyanin RHS # 79B

#200200126



FL 1922¹⁵

REPRODUCE LOCALLY. Include form number and date on reproductions.

FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION
PLANT VARIETY PROTECTION OFFICE

EXHIBIT C
OBJECTIVE DESCRIPTION OF VARIETY
POTATO (*Solanum tuberosum* L.)

Public reporting burden for this collection of information is estimated to average minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the form. Send comments regarding this burden estimate or any other aspects of this collection of information, including suggestions for reducing this burden, to USDA, OIRM, Clearance Officer, AG Box 7630, Washington, DC 20250, regarding OMB No. 0581-0055. When replying, refer to OMB number and form number you your letter.

INSTRUCTIONS

The Objective Description Form:

The objective description form lists characteristics to be used as the basis for developing the description of potato varieties. It is designed to guide the applicant in describing a variety in detail so a meaningful comparison with other potato varieties can be accomplished. It is recommended that this form be completed in as much detail as possible to ensure an accurate description. Please fill in the requested data and place the appropriate number that describes the varietal characters typical of this potato variety and the reference varieties in the respective boxes.

Test Guidelines:

Any statistical and trial (field test) data that may be necessary to support the variety description should be attached to this form. Please include for trial data the plot size, number of replications, number of plants, plant spacing, trial locations and growing periods. Trials should normally be conducted at one place, in the region that the variety has been adapted for, with a minimum of one growing period in the United States. All comparative data should be determined from varieties entered in the same trials. The size of the plots should be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made at the end of the growing period. As a minimum, each test should include a total of 60 plants which should be divided between two or more replicates. Separate plots for observation and measuring can only be used if they have been subject to similar environmental conditions. To determine color for a plant or plant parts a recognized standard color chart must be used such as the Royal Horticultural Society (R.H.S.) Color Chart.

Reference Varieties:

The application variety should be compared to at least one reference variety preferably a set of reference varieties. The reference varieties should be market class standard varieties currently grown in the United States and or the variety(ies) most similar. The following varieties are recommended as market class standards to be used as reference varieties:

Yellow-flesh table-stock	Yukon Gold
Round-white table-stock	Superior
Chip-processing	Atlantic, Snowden, Norchip
Frozen-processing	Russet Burbank
Russet table-stock	Russet Burbank, Russet Norkotah, Goldrush
Red table-stock	Red Pontiac, Red Norland, Red Lasoda

If the applicant does not use one of the recommended reference varieties the PVP office may not have a complete description for the reference variety used; therefore the applicant may have to supply this description by completing an Exhibit C form for the reference variety.

Characteristics:

The plant type and growth habit characteristics are collected at early first bloom. Figure 1 is supplied to help visualize the growth habit. For this descriptor, look at the stems rather than the stems and foliage. Plant maturity is measured at natural vine senescence.

Stem characteristics are also collected at early bloom. Stem anthocyanin coloration is divided into two descriptors: Location and intensity. Figure 12 is supplied to give an example of stem wings.

Leaf characteristics are observed at early first bloom. Fully-developed leaves located on the middle third of the plant should be used. Leaf pubescence refers to general trichomes. Figure 2 is supplied for examples of leaf silhouette. Figure 3 should be used to describe terminal and primary leaflet shape. Figures 4 and 5 are used to describe the terminal and primary leaflet shape of tip and base, respectively. To measure the total number of primary leaflets pairs, collect 10 fully-developed petioles (with leaves attached from each replication and take the average number of secondary and tertiary leaflets. Figure 11 is supplied to define leaf characteristics. Glandular trichomes should be described through descriptor #12 (Additional Comments and Characteristics). Leaf stipules are shown in figure 13 for visual definition.

Inflorescence characteristics should be measured at early first bloom. Figures 6 and 7 are supplied to describe corolla and anther shape, respectively. Corolla, calyx, anther, stigma and pollen should be observed on newly opened flowers.

Berry production should be based on field-grown plants rather than greenhouse plants.

Tuber characteristics should be observed following harvest. Figures 9 and 10 are available to describe distribution of secondary color and tuber shape, respectively.

Disease and pest reactions should be based upon specific tests rather than field observations. Other diseases or pests reactions not requested can be described if it is felt that it would be helpful to the description.

Quality characteristics should be described according to the market use.

If the plant is transgenic, this gene insertion(s) should be described.

Chemical identification and any other characteristics can be describe if they are helpful in distinguishing the variety.

A rating system of 1-9 provides a scale for describing most characteristics in this form. Characteristic may be rated with intermediate values where the characteristic grades gradually from one extreme to another. For example, if the character states are described as: 3 = Small; 5 = Medium; 7 = Large; the other values of 1, 2, 4, 6, 8, or 9 may be selected.

Legend:

V = Application Variety

R1-R4 = Reference Varieties

* = Both the reference variety(ies) and application variety must be described for characteristics designated with an asterisk.

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
Frito Lay North America, Inc.	1989 84.13	FL 1922
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) 7701 Legacy Drive Plano, TX 75024		FOR OFFICIAL USE ONLY PVPO NUMBER #200200126

REFERENCE VARIETIES: Enter the reference variety name in the appropriate box.

Application Variety (V)	Reference Variety 1 (R1)	Reference Variety 2 (R2)	Reference Variety 3 (R3)	Reference Variety 4 (R4)
FL 1922	Norchip			

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

1. MARKET CHARACTERISTICS:

*MARKET CLASS:

1 = Yellow-flesh Tablestock 2 = Round-white Tablestock 3 = Chip-processing 4 = Frozen-processing
5 = Russet Tablestock 6 = Other _____

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

2. LIGHT SPROUT CHARACTERISTICS: (See Figure 1)

*LIGHT SPROUT: GENERAL SHAPE

1 = Spherical 2 = Ovoid 3 = Conica 4 = Broad cylindrica 5 = Narrow cylindrical 6 = Other _____

V	4	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*LIGHT SPROUT BASE: PUBESCENCE ~~OF TIP~~

1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	3	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*LIGHT SPROUT BASE: ANTHOCYANIN COLORATION

1 = Green 2 = Red-violet 3 = Blue-violet 4 = Other(describe) _____

V	3	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*LIGHT SPROUT BASE: INTENSITY OF ANTHOCYANIN COLORATION (IF PRESENT)

1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	5	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

* LIGHT SPROUT TIP: HABIT

1 = Closed 2 = Intermediate 3 = Open

V	2	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

2. LIGHT SPROUT CHARACTERISTICS: (continued)**LIGHT SPROUT TIP: PUBESCENCE**

1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LIGHT SPROUT TIP ANTHOCYANIN COLORATION

1 = Green 2 = Red-violet 3 = Blue-violet 4 = Other(describe) _____

V	3	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LIGHT SPROUT TIP: INTENSITY OF ANTHOCYANIN COLORATION (IF PRESENT)

1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	5	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LIGHT SPROUT ROOT INITIALS: ~~FREQUENCY~~ LENGTH

1 = Short 2 = Medium 3 = Long

V	2	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

3. PLANT CHARACTERISTICS:**GROWTH HABIT: (See Figure 2)**

3 = Erect (>45° with ground) 5 = Semi-erect (30-45° with ground) 7 = Spreading

V	7	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TYPE:

1 = Stem (foliage open, stems clearly visible) 2 = Intermediate 3 = Leaf (Foliage closed, stems hardly visible)

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

MATURITY: Days after planting (DAP) at vine senescence

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

PLANTING DATE:

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

***REGIONAL AREA:**

1 = Pacific North West (WA, OR, ID, CO, CA) 2 = North Central (ND, WI, MI, MN, OH) 3 = North East (ME, NY, PA, NJ, MD, MA, RI,)
 4 = Mid-Atlantic East (VI, NC, SC, South NJ, FL) 5 = South (LA, TX, AZ, NE) 6 = Canada
 7 = Europe 8 = England 9 = Latin America 10 = Brazil 11 = Other _____

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

MATURITY CLASS:

1 = Very Early (<100 DAP) 2 = Early (100-110 DAP) 3 = Mid-season (111-120 DAP) 4 = Late (121-130 DAP) 5 = Very Late (>130 DAP).

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

NAME OF APPLICANT(S)

FOR OFFICIAL USE ONLY

PVPO NUMBER

#200200126

Frito-Lay North America, Inc.

ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)

7701 Legacy Drive
Plano, Texas 75024

VARIETY (V) NAME

FL 1922

TEMPORARY OR EXPERIMENTAL
DESIGNATION

1989 84.13

REFERENCE VARIETIES: Enter the reference variety name in the appropriate box

Reference Variety 1 (R1)	Reference Variety 2 (R2)	Reference Variety 3 (R3)	Reference Variety 4 (R4)
Norchip			

1. MARKET CHARACTERISTICS:**MARKET CLASS:**

1 = Yellow-flesh tablestock; 2 = Round-white tablestock; 3 = Chip-processing; 4 = Frozen-processing;
5 = Russet tablestock; 6 = Other _____

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

2. PLANT CHARACTERISTICS:**GROWTH HABIT:** (See figure 1)

3 = Erect (>45° with ground); 5 = Semi-erect (30-45° with ground); 7 = Spreading.

V	7	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TYPE:

1 = Stem (foliage open, stems clearly visible); 2 = Intermediate; 3 = Leaf (Foliage closed, stems hardly visible)

V	2	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

MATURITY: Days after planting (DAP) at vine senescence

V	110	R1	110	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

PLANTING DATE:

V	April 26, 02	R1	April 26, 02	R2		R3		R4	
---	--------------	----	--------------	----	--	----	--	----	--

REGION/AREA:

V	Central, WI	R1	Central, WI	R2		R3		R4	
---	-------------	----	-------------	----	--	----	--	----	--

MATURITY CLASS:

1 = Very Early (<100 DAP); 2 = Early (100-110 DAP); 3 = Mid-season (111-120 DAP); 4 = Late (121-130 DAP);
5 = Very Late (>130 DAP).

30A 4/25/02

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

3. STEM CHARACTERISTICS: *Measure at early first bloom** **STEM ANTHOCYANIN COLORATION:**

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

V	5	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

STEM WINGS: *(See figure 12)*

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

V	5	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

4. LEAF CHARACTERISTICS:**LEAF COLOR:** *(Observe fully developed leaves located on middle 1/3 of plant)*

1 = Yellowish-green; 2 = Olive-green; 3 = Medium green; 4 = Dark green; 5 = Grey-green; 6 = Other

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LEAF COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Observe fully developed leaves located on middle 1/3 of plant & circle the appropriate color chart)

V	137A	R1	137A	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

LEAF PUBESCENCE DENSITY:

1 = Absent; 2 = Sparse; 3 = Medium; 4 = Thick; 5 = Heavy

V	3	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LEAF PUBESCENCE LENGTH:

1 = None; 2 = Short; 3 = Medium; 4 = Long; 5 = Very long

V	2	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

(Note: Descriptor #19 can be used to describe the type and length of the glandular trichomes observed.)

* **LEAF SILHOUETTE:** *(See figure 2)*

1 = Closed; 3 = Medium; 5 = Open

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PETIOLES ANTHOCYANIN COLORATION:

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

V	5	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LEAF STIPULES SIZE: (See figure 13)

1 = Absent; 3 = Small; 5 = Medium; 7 = Large

V	⁵ 4	R1	⁷ 6	R2		R3		R4	
---	-------------------	----	-------------------	----	--	----	--	----	--

per correspondence Feb 22, 2007

TERMINAL LEAFLET SHAPE: (See figure 3 & 11)

1 = Narrowly ovate; 2 = Medium ovate; 3 = Broadly ovate; 4 = Lanceolate; 5 = Elliptical;
6 = Oblong; 7 = Oblong; 8 = OtherLAC
8-7-07

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TERMINAL LEAFLET TIP SHAPE: (See figure 4 & 11)

1 = Acute; 2 = Cuspidate; 3 = Acuminate; 4 = Obtuse; 5 = Other

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*

TERMINAL LEAFLET BASE SHAPE: (See figure 5 & 11)

1 = Cuneate; 2 = Acute; 3 = Obtuse; 4 = Cordate; 5 = Truncate; 6 = Lobed; 7 = Other

V	4	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*

TERMINAL LEAFLET MARGIN WAVINESS:

1 = Absent; 2 = Slight; 3 = Weak; 4 = Medium; 5 = Strong

V	3	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

NUMBER OF PRIMARY LEAFLET PAIRS: (See figure 11)

AVERAGE:

V	4	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

RANGE:

V	4 to 4	R1	4 to 6	R2	to	R3	to	R4	to
---	--------	----	--------	----	----	----	----	----	----

PRIMARY LEAFLET TIP SHAPE: (See figure 4 & 11)

1 = Acute; 2 = Cuspidate; 3 = Acuminate; 4 = Obtuse; 5 = Other

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*

PRIMARY LEAFLET SIZE:

1 = Very Small; 2 = Small; 3 = Medium; 4 = Large; 5 = Very Large

V	3/4	R1	4	R2		R3		R4	
---	-----	----	---	----	--	----	--	----	--

/Primary leaflets are quite long

PRIMARY LEAFLET SHAPE: (See figure 3 & 11)1 = Narrowly ovate; 2 = Medium ovate; 3 = Broadly ovate; 4 = Lanceolate; 5 = Elliptical;
6 = Obovate; 7 = Oblong; 8 = Other

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PRIMARY LEAFLET BASE SHAPE: (See figure 5 & 11)

1 = Cuneate; 2 = Acute; 3 = Obtuse; 4 = Cordate; 5 = Truncate; 6 = Lobed; 7 = Other

V	4	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

NUMBER OF SECONDARY AND TERTIARY LEAFLET PAIRS: (See figure 11)**AVERAGE:**

V	3.5	R1	6	R2		R3		R4	
---	-----	----	---	----	--	----	--	----	--

RANGE:

V	2	to	7	R1	3	to	9	R2		to	R3		to	R4		to
---	---	----	---	----	---	----	---	----	--	----	----	--	----	----	--	----

5. INFLORESCENCE CHARACTERISTICS:**NUMBER OF INFLORESCENCE / PLANT:****AVERAGE:**

V	6	R1	23	R2		R3		R4	
---	---	----	----	----	--	----	--	----	--

RANGE:

V	3	to	9	R1	1	to	4	R2		to	R3		to	R4		to
---	---	----	---	----	---	----	---	----	--	----	----	--	----	----	--	----

NUMBER OF FLORETS / INFLORESCENCE:**AVERAGE:**

V	6	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

RANGE:

V	3	to	11	R1	2	to	8	R2		to	R3		to	R4		to
---	---	----	----	----	---	----	---	----	--	----	----	--	----	----	--	----

*

COROLLA INNER SURFACE COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Measure predominant color of newly open flower & circle the appropriate color chart)

V	90B	R1	155A	R2		R3		R4	
---	-----	----	------	----	--	----	--	----	--

* COROLLA OUTER SURFACE COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Measure predominant color of newly open flower & circle the appropriate color chart)

V	91A
---	-----

R1	155A
----	------

R2	
----	--

R3	
----	--

R4	
----	--

*

COROLLA INNER SURFACE COLOR: (Measure predominant color of newly open flower)

1 = White; 2 = Red-violet; 3 = Blue-violet; 4 = Other _____

V	3	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

w/white tips

COROLLA SHAPE: (See figure 6)

1 = Very rotate; 2 = Rotate; 3 = Pentagonal; 4 = Semi-stellate; 5 = Stellate

V	2	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

CALYX ANTHOCYANIN COLORATION:

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very strong

V	5	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

ANTHER COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Measure when newly opened flower is fully expanded and circle the appropriate color chart)

V	17B	R1	17B	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

ANTHER SHAPE: (See figure 7)

1 = Broad cone; 2 = Narrow cone; 3 = Pear shape cone; 4 = Loose; 5 = Other _____

V	2	R1	2/3	R2		R3		R4	
---	---	----	-----	----	--	----	--	----	--

POLLEN PRODUCTION:

1 = None; 3 = Some; 5 = Abundant

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

STIGMA SHAPE: (See figure 8)

1 = Capitate; 2 = Clavate; 3 = Bi-lobed

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

STIGMA COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Circle the appropriate color chart)

V	146A	R1	146A	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

BERRY PRODUCTION: (Under field conditions)

1 = None; 3 = Low; 5 = Moderate; 7 = Heavy; 9 = Very heavy

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

5. TUBER CHARACTERISTICS:

*

PREDOMINANT SKIN COLOR:

1 = White; 2 = Light Yellow; 3 = Yellow; 4 = Buff; 5 = Tan; 6 = Brown; 7 = Pink; 8 = Red;
 9 = Purplish-red; 10 = Purple; 11 = Dark purple-black; 12 = Other_____

V	4
---	---

R1	5
----	---

R2	
----	--

R3	
----	--

R4	
----	--

PREDOMINANT SKIN COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
 (Circle the appropriate color chart)

V	161
---	-----

R1	199B
----	------

R2	
----	--

R3	
----	--

R4	
----	--

SECONDARY SKIN COLOR:

1 = Absent; 2 = Present, please describe: very light blue eyes

V	2
---	---

R1	1
----	---

R2	
----	--

R3	
----	--

R4	
----	--

SECONDARY SKIN COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
 (Circle the appropriate color)

V	81A
---	-----

R1	
----	--

R2	
----	--

R3	
----	--

R4	
----	--

SECONDARY SKIN COLOR DISTRIBUTION:

1 = Eyes; 2 = Eyebrows; 3 = Splashed; 4 = Scattered; 5 = Spectacled; 6 = Stippled; 7 = Other_____

V	1
---	---

R1	
----	--

R2	
----	--

R3	
----	--

R4	
----	--

SKIN TEXTURE:

1 = Smooth; 2 = Rough (flaky); 3 = Netted; 4 = Russetted; 5 = Heavily russetted; 6 = Other_____

V	3
---	---

R1	1
----	---

R2	
----	--

R3	
----	--

R4	
----	--

*

TUBER SHAPE: (See figure 10)

1 = Compressed; 2 = Round; 3 = Oval; 4 = Oblong; 5 = Long; 6 = Other_____

V	2/3
---	-----

R1	2/3
----	-----

R2	
----	--

R3	
----	--

R4	
----	--

Tubers tend to be narrower on the stolon end. 16% compressed

TUBER THICKNESS:

1 = Round; 2 = Medium thick; 3 = Slightly flattened; 4 = Flattened; 5 = Other_____

V	2/3
---	-----

R1	3/4
----	-----

R2	
----	--

R3	
----	--

R4	
----	--

TUBER LENGTH (mm):**AVERAGE:**

V 69.4

R1 73.43

R2

R3

R4

RANGE:

V 54 to 97

R1 51 to 114

R2 to

R3 to

R4 to

STANDARD DEVIATION:

V 9.21

R1 12.25

R2

R3

R4

AVERAGE WEIGHT OF SAMPLE TAKEN:

V

R1

R2

R3

R4

TUBER WIDTH (mm):**AVERAGE:**

V 61.93

R1 65.49

R2

R3

R4

RANGE:

V 49 to 74

R1 52 to 89

R2 to

R3 to

R4 to

STANDARD DEVIATION:

V 6.06

R1 7.84

R2

R3

R4

AVERAGE WEIGHT OF SAMPLE TAKEN:

V

R1

R2

R3

R4

TUBER THICKNESS (mm):**AVERAGE:**

V 53.39

R1 51.09

R2

R3

R4

RANGE:

V 42 to 65

R1 22 to 66

R2 to

R3 to

R4 to

STANDARD DEVIATION:

V 4.90

R1 6.39

R2

R3

R4

AVERAGE WEIGHT OF SAMPLE TAKEN:

V

R1

R2

R3

R4

TUBER EYE DEPTH:

1 = Protruding; 2 = Shallow; 3 = Intermediate; 4 = Deep; 5 = Very deep

V 2/3

R1 4

R2

R3

R4

TUBER LATERAL EYES

1 = Protruding; 2 = Shallow; 3 = Intermediate; 4 = Deep; 5 = Very deep

V	2
---	---

R1	2
----	---

R2	
----	--

R3	
----	--

R4	
----	--

NUMBER EYE / TUBER:**AVERAGE:**

V	9
---	---

R1	
----	--

R2	
----	--

R3	
----	--

R4	
----	--

RANGE:

V	8 to 10
---	---------

R1	to
----	----

R2	to
----	----

R3	to
----	----

R4	to
----	----

DISTRIBUTION OF TUBER EYES:

1 = Predominantly apical; 2 = Evenly distributed

V	1
---	---

R1	1
----	---

R2	
----	--

R3	
----	--

R4	
----	--

PROMINENCE OF TUBER EYEBROWS:

1 = Not prominent; 2 = Slight prominence; 3 = Medium prominence; 4 = Very prominent; 5 = Other _____

V	2
---	---

R1	3
----	---

R2	
----	--

R3	
----	--

R4	
----	--

*** PRIMARY TUBER FLESH COLOR CHART VALUE:** Royal Horticulture Society Color Chart or Munsell Color Chart
 (Circle the appropriate color chart)

*Yellow - white**Yellow - white**per correspondence Feb 22, 2007*

V	158B
---	------

R1	158A
----	------

R2	
----	--

R3	
----	--

R4	
----	--

FL 1922 has a clearer white flesh - appears cleaner

LMC 8-7-07

SECONDARY TUBER FLESH COLOR:

1 = Absent; 2 = Present, please describe: _____

V	
---	--

R1	
----	--

R2	
----	--

R3	
----	--

R4	
----	--

SECONDARY TUBER FLESH COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
 (Circle the appropriate color chart)

V	
---	--

R1	
----	--

R2	
----	--

R3	
----	--

R4	
----	--

NUMBER OF TUBERS / PLANT:

1 = Low (<8); 2 = Medium (8 -15); 3 = High (>15)

V	1
---	---

R1	1
----	---

R2	
----	--

R3	
----	--

R4	
----	--

6. DISEASES CHARACTERISTICS:

DISEASES REACTION: 0 = NOT TESTED; 1 = RESISTANT; 3 = MODERATELY RESISTANT;
5 = MODERATELY SUSCEPTIBLE; 7 = SUSCEPTIBLE; 9 = HIGHLY SUSCEPTIBLE

BACTERIAL RING ROT, FOLIAR REACTION:

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

BACTERIAL RING ROT, TUBER REACTION:

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

LATE BLIGHT:

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

PLRV (LEAF ROLL):

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

PVX:

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

PVY:

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

OTHER: common scab (streptomyces scabies)

V	3	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

OTHER:

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

per Corres pondance Feb 22, 2007
LMC 8-7-07

7. PESTS CHARACTERISTICS:

PEST REACTION: 0 = NOT TESTED; 1 = RESISTANT; 3 = MODERATELY RESISTANT;
5 = MODERATELY SUSCEPTIBLE; 7 = SUSCEPTIBLE; 9 = HIGHLY SUSCEPTIBLE

GOLDEN NEMATODE:

V	0	R1	7	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

OTHER: Both are presumed susceptible based on their pedigrees

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

8. GENE TRAITS:**INSERTION OF GENES:**☐

YES

☐

NO

If YES, describe the gene(s) introduced or attach information:

9. QUALITY CHARACTERISTICS:**CHIEF MARKET:**

Processing to make potato chips

SPECIFIC GRAVITY (wt. air /wt. air - wt. water)

1 < 1.060; 2 = 1.060-1.069; 3 = 1.070-1.079; 4 = 1.080-1.089; 5 > 1.090

V 3

R1

R2

R3

R4

TOTAL GLYCOALKALOID CONTENT (mg. / 100 g. fresh tuber)

V 1.39

R1

R2

R3

R4

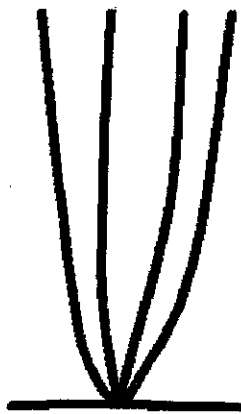
OTHER QUALITY CHARACTERISTICS: Describe any other quality characteristics that may aid in identification, (e.g. chip-processing, french fry processing, baking, boiling, after-cooking darkening). Please attach data and corresponding protocol.
See exhibit D-1

11. CHEMICAL IDENTIFICATION:

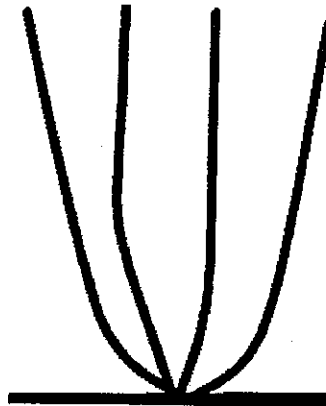
Describe chemical traits of the candidate variety that aid in its identification (e.g. protein or DNA electrophoresis). Please attach data and the corresponding protocol.

12. ADDITIONAL COMMENTS AND CHARACTERISTICS:

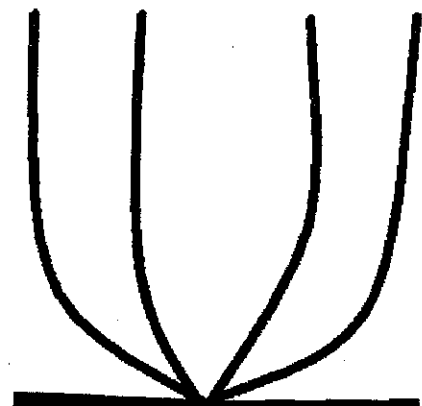
Include any additional descriptors that would be useful in distinguishing the candidate variety.

Figure 1: Growth Habit

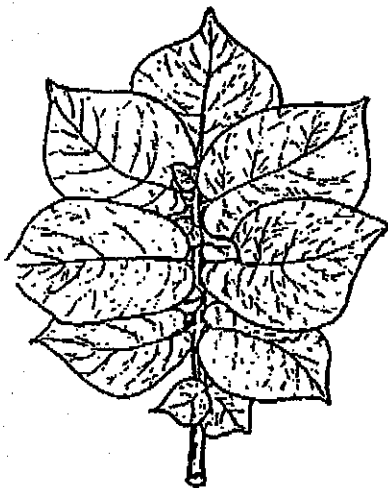
3 = Erect
> 45° with ground



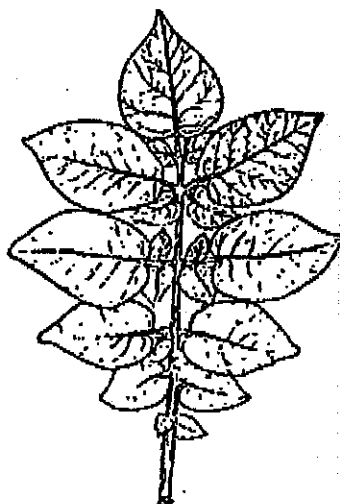
5 = Semi-erect
30-45° with ground



7 = Spreading
< 30° with ground

Figure 2: Leaf Silhouette

1 = Closed



3 = Medium



5 = Open

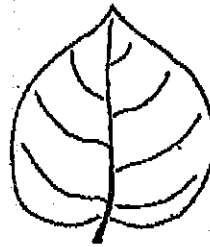
Figure 3: Terminal Leaflet Shape / Primary Leaflet Shape



**1=Narrowly
Ovate**



**2=Medium
Ovate**



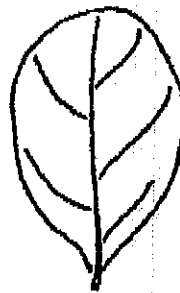
**3=Broadly
Ovate**



4=Lanceolate



5=Elliptical



6=Obovate



7=Oblong

Figure 4: Terminal Leaflet Shape of Tip / Primary Leaflet Shape of Tip

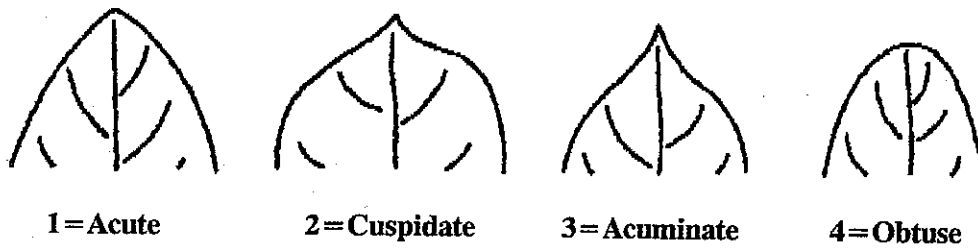


Figure 5: Terminal Leaflet Shape of Base / Primary Leaflet Shape of Base

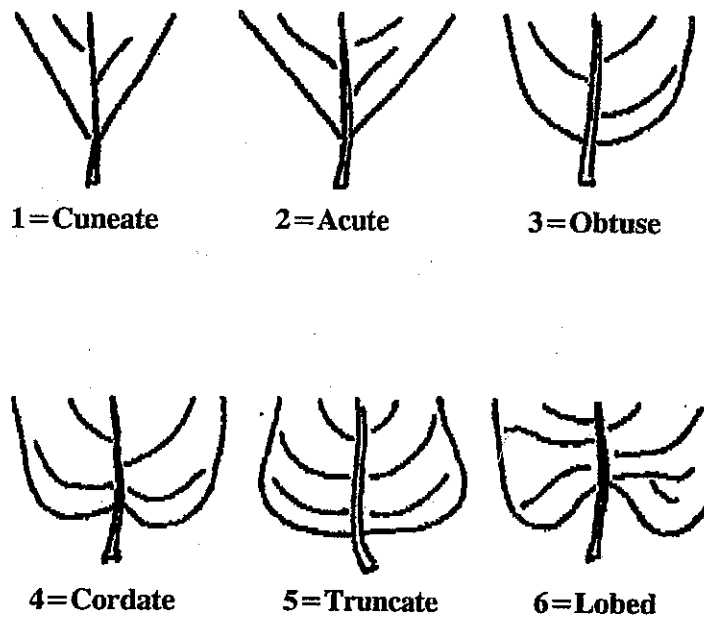


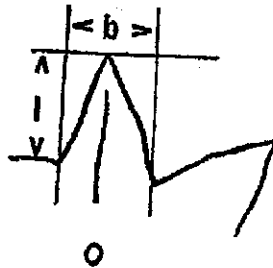
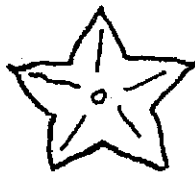
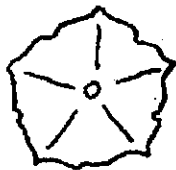
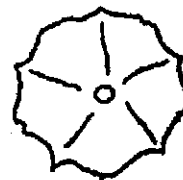
Figure 6: Corolla Shape**stellate**
 $l > b$ **semi-stellate**
 $l = b$ **pentagonal**
 $l < b$ **rotate**
 $l \ll b$ **very rotate**
 $l \lll b$

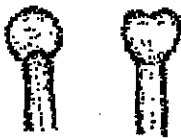
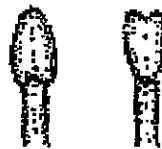
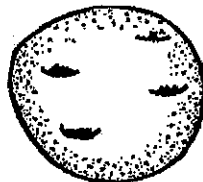
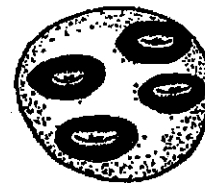
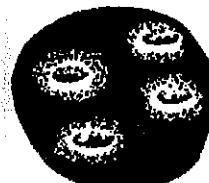
Figure 7: Anther Shape**1=Broad cone****2=Narrow cone****3=Pear shape cone****4=Loose****Figure 8: Stigma Shape****1=Capitate****2=Clavate****3=Bilobed****Figure 9: Distribution of Secondary Tuber Color****1=Eyes****2=Eyebrows****3=Splashed****4=Scattered****5=Spectacled****6=Stippled**

Figure 10: Tuber Shape

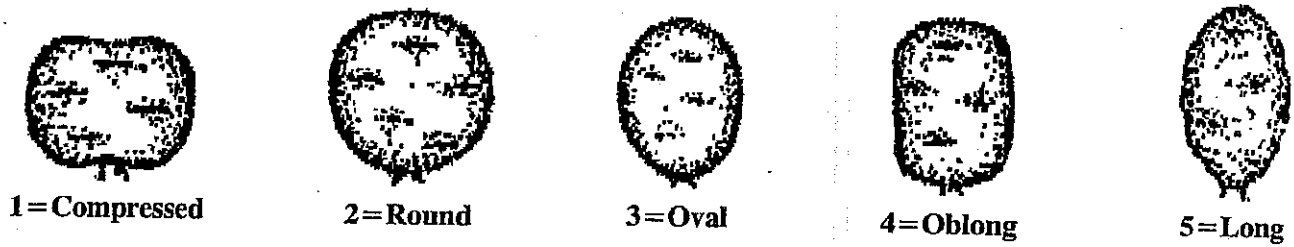


Figure 11: Leaf Dissection

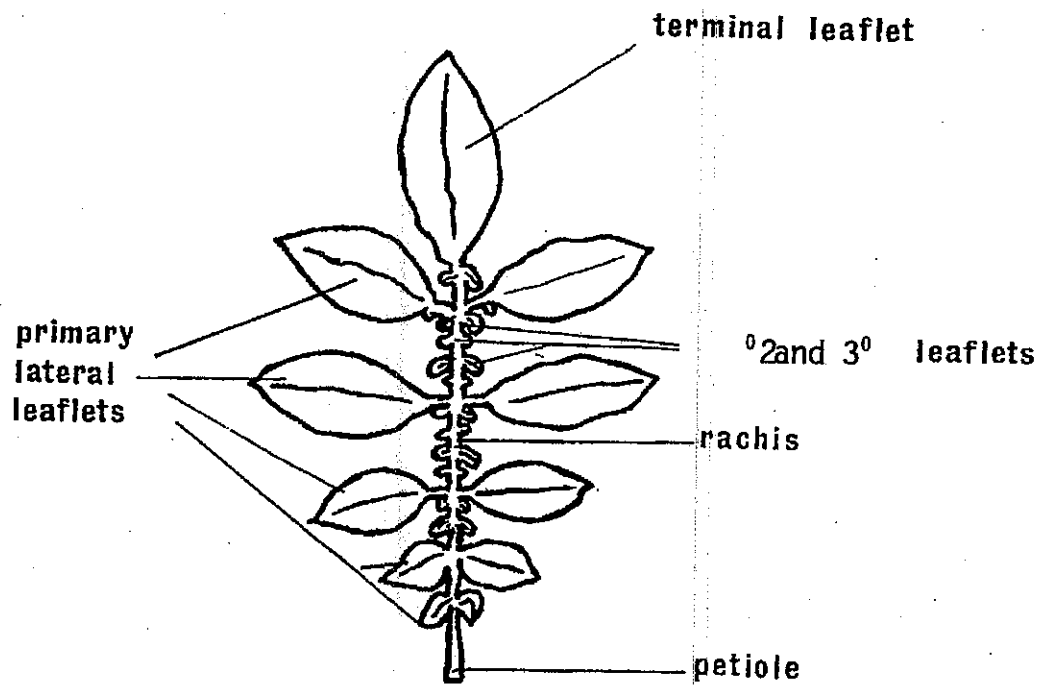


Figure: 12 Stem Wings

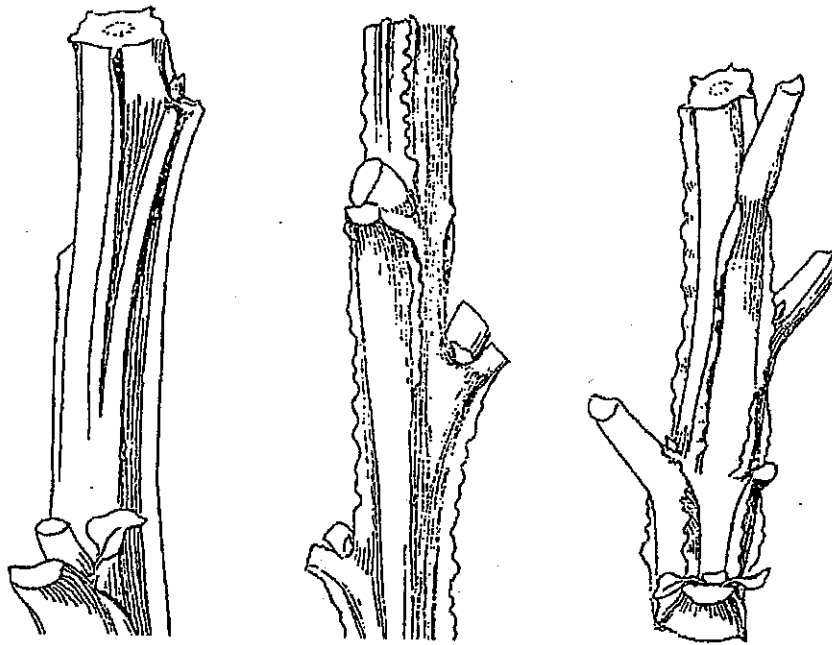


Figure 13: Leaf Stipules:

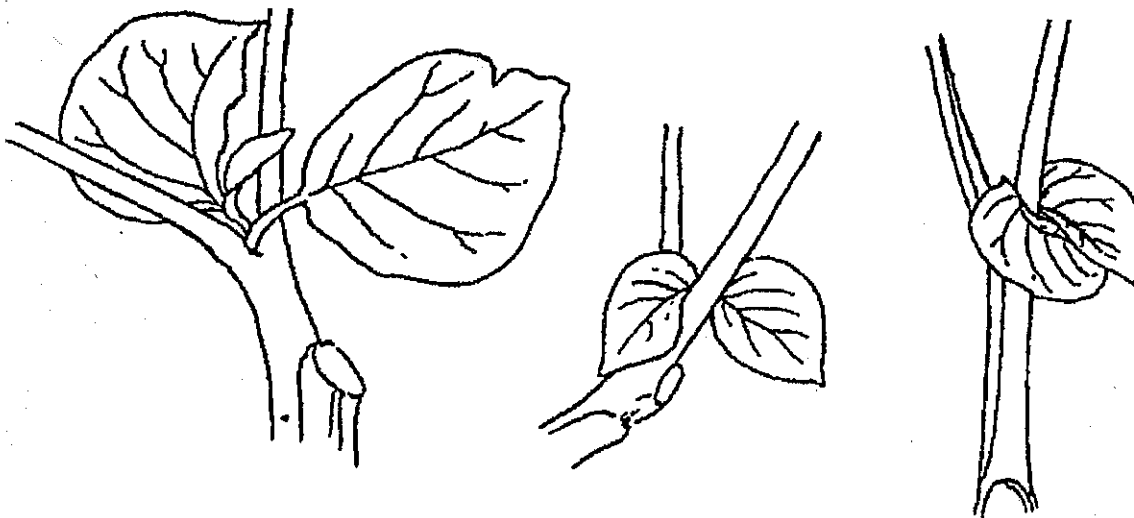


EXHIBIT D. Additional Description of the Variety

- 1) Isozyme fingerprint of FL 1922, with reference to methodology. Comparison of fingerprint with that of Norchip, showing distinct patterns for each variety (Exhibit D-1).
- 2) Summary of 100-tuber sample of tuber dimensions of FL 1922 compared to 100 tubers of Norchip.

EXHIBIT D-1

Isozyme electrophoresis fingerprints of FL 1922 compared to Snowden.

Variety	Mdh-1	Mdh-2	Pgdh-3	Idh-1	Pgi-1	Aps-1	Got-1	Got-2	Pgm-1	Pgm-2	Dia-1	Prx-1	Prx-3	Adh-1
Norchip	2234	2222	1222	--	2224	--	3344	3335	1122	2222	--	--	1123	--
FL 1922	1224	2222	2222	--	2222	--	3344	3555	2233	2223	--	--	1111	--

Source of Data: Dr. David Douches, Michigan State University, 1995 & 1998

Procedures and allelic designations used are according to Douches, D.S. and K. Ludlam, 1991.
Electrophoretic Characterization of North American Potato Cultivars. Am. Potato J. 68:767-780.

Plant Variety Protection

FL 1922 - these tubers were grown at Paramount Farms

Date: 15 October 01

#200200126

Tuber Measurements

Length (mm) Width (mm) Depth (mm) C=Compressed tuber

63	60	52	
82	68	57	
87	74	60	
75	60	50	
66	57	49	
73	66	53	
87	73	56	
69	66	64	
83	71	52	
80	71	56	
84	71	59	
63	66	54	C
63	56	45	
65	54	52	
69	57	57	
68	64	54	
67	55	50	
78	70	58	
66	52	45	
64	56	48	
57	61	51	C
54	54	45	
78	73	63	
74	63	51	
73	61	44	
62	54	49	
55	60	57	C
69	65	53	
73	56	53	
63	60	51	
64	60	51	
64	62	50	
59	64	54	C
55	61	51	C
64	67	60	C
75	72	64	
62	64	55	C
75	56	50	
72	64	55	
62	57	50	
69	60	52	
63	61	54	
78	72	51	
66	56	51	
60	61	56	C
56	54	50	
54	57	52	C
66	64	53	

Length:

Mean 69.40 Max 97
STD 9.21 Min 54

Width:

Mean 61.93 Max 74
STD 6.06 Min 49

Depth:

Mean 53.39 Max 65
STD 4.90 Min 42

Plant Variety Protection**FL 1922 - these tubers were grown at Paramount Farms**

Date: 15 October 01

#200200126

Tuber Measurements

Length (mm) Width (mm) Depth (mm) C=Compressed tuber

65	57	50	
62	59	48	
54	57	51	C
63	66	55	C
69	53	49	
55	58	49	C
63	58	42	
72	56	49	
78	67	50	
73	68	55	
66	54	46	
54	56	52	C
66	65	55	
74	68	63	
78	58	51	
97	72	61	
73	72	61	
88	61	57	
86	72	62	
75	58	46	
77	71	61	
68	58	50	
77	64	54	
57	61	54	C
87	68	64	
85	66	50	
69	63	55	
66	55	57	
69	66	64	
66	61	52	
84	74	61	
87	74	65	
75	63	56	
72	62	53	
75	71	61	
75	53	52	
55	59	55	C
66	58	54	
73	57	51	
73	66	52	
66	57	52	
59	56	53	
56	49	49	
69	60	54	
73	60	50	
67	61	50	
73	57	52	
69	58	50	

Plant Variety Protection

FL 1922 - these tubers were grown at Paramount Farms

Date: 15 October 01

#200200126

Tuber Measurements

Length (mm) Width (mm) Depth (mm) C=Compressed tuber

59	64	52	C
66	57	50	
64	55	49	
78	68	58	

Plant Variety Protection

Norchip - these tubers were grown at Paramount Farms

Date: 15 October 01

#200200126

Tuber Measurements

Length (mm)	Width (mm)	Depth (mm)
104	89	63
90	81	57
75	62	47
84	60	52
92	85	55
87	68	57
87	71	52
80	72	54
78	81	53
84	68	57
84	68	57
81	66	42
69	65	50
64	54	46
87	83	64
114	81	66
74	72	59
70	59	49
67	64	50
60	63	47
78	57	50
76	66	22
78	72	57
95	74	60
66	61	50
66	64	52
62	64	51
57	68	50
73	74	52
70	58	44
56	66	43
87	64	52
80	71	64
70	61	49
75	63	50
74	64	46
78	75	59
87	72	57
67	76	62
85	72	60
79	54	44
63	52	43
65	58	48
66	60	50
66	52	42
74	64	50
74	59	52
66	61	50

Length:

Mean	73.43	Max	114
STD	12.25	Min	51

Width:

Mean	65.49	Max	89
STD	7.84	Min	52

Depth:

Mean	51.09	Max	66
STD	6.39	Min	22

Norchip - these tubers were grown at Paramount Farms

Date: 15 October 01

Tuber Measurements

Length (mm)	Width (mm)	Depth (mm)
70	70	53
68	54	43
83	67	64
63	58	44
55	65	45
55	57	44
66	56	46
62	58	46
55	54	42
57	63	47
55	54	45
69	64	51
61	55	46
52	56	42
51	55	43
55	57	51
56	64	49
56	56	44
87	67	54
78	74	54
94	76	56
114	66	50
78	68	54
77	72	53
75	71	53
87	67	55
75	64	52
72	62	53
77	71	50
74	67	56
87	72	60
63	70	53
71	65	50
63	58	44
64	61	48
63	57	49
66	65	53
69	54	44
75	70	52
77	68	47
66	65	46
69	58	49
72	63	54
79	58	50
78	68	54
78	73	60
86	74	55
73	71	54

Plant Variety Protection

Norchip - these tubers were grown at Paramount Farms

Date: 15 October 01

Tuber Measurements

<i>Length (mm)</i>	<i>Width (mm)</i>	<i>Depth (mm)</i>
84	72	56
69	61	52
84	80	58
66	64	50

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E

STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Frito-Lay North America, Inc. <i>2/11/05 BGM</i>	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER 1989 84.13	3. VARIETY NAME FL 1922
4. ADDRESS (Street and No., or R.F.D. No., City, State, and Zip, and Country) 7701 Legacy Drive Plano, Texas 75024	5. TELEPHONE (include area code) (972) 334-3822	6. FAX (include area code) (972) 334-5965
7. PVPO NUMBER <i>2/11/05 BGM</i> #200200126		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain ☒ YES ☐9. Is the applicant (individual or company) a U.S. National or a U.S. based company? If no, give name of country ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (If needed, use the reverse for extra space):

Breeders employed by Frito-Lay, Inc. developed this variety. By agreement between Frito-Lay and its employees, all rights to inventions and discoveries made by the employees while employed by Frito-Lay, Inc. are assigned to Recot, Inc., with no ownership rights of any kind retained by the employees.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

2002 00 126

State of Delaware
Secretary of State
Division of Corporations
Delivered 05:24 PM 01/15/2004
FILED 05:24 PM 01/15/2004
SRV 040033329 - 2202650 FILE

**STATE OF DELAWARE
CERTIFICATE OF AMENDMENT
OF CERTIFICATE OF INCORPORATION**

Recot, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware.

DOES HEREBY CERTIFY:

FIRST: The Board of Directors of Recot, Inc. has duly adopted a resolution setting forth a proposed amendment of the Certificate of Incorporation of said corporation, declaring said amendment to be advisable. The resolution setting forth the proposed amendment is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended by changing the Article thereof numbered "ARTICLE ONE" so that, as amended, said Article shall be and read as follows:

The name of the corporation is FRITO-LAY NORTH AMERICA, INC.

SECOND: That said amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

THIRD: That the capital of said corporation shall not be reduced under or by reason of said amendment.

FOURTH: That this name change shall be effective December 29, 2003, for accounting purposes only.

FIFTH: That the Principal Administrative Office for Frito-Lay North America, Inc. shall be located at 7701 Legacy Drive, Plano, Texas 75024.

IN WITNESS WHEREOF, said Recot, Inc. has caused this certificate to be signed by Kelly Mahon Tullier, an Authorized Officer, this 20th day of January, 2004.

By: 

Authorized Officer

Title: Vice President and Treasurer
Name: Kelly Mahon Tullier

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

**EXHIBIT F
DECLARATION REGARDING DEPOSIT**

NAME OF OWNER (S) Frito Lay North America, Inc.	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 7701 Legacy Drive Plano, TX 75024	TEMPORARY OR EXPERIMENTAL DESIGNATION 1989 84.13
NAME OF OWNER REPRESENTATIVE (S) Robert W. Hoopes	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 7701 Legacy Drive Plano, TX 75024	VARIETY NAME FL 1922 FOR OFFICIAL USE ONLY PVPO NUMBER #200200126

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Signature

Date

